Question # 1 (15 marks)

Temperatures have varied a significant amount last winter. A sample of temperatures was taken at noon each day over a ten day period in January of this year.

Temperature					
6					
7					
1					
-2					
7					
0					
7					
3					
7					
4					

A) Compute the Mean.
B) Compute the Median.
C) Compute the Mode.
D) Compute the Range.
E) Compute the Variance
F) Compute the Standard Deviation
G) Compute the Coefficient of Variation
H) Compute the sum of the deviations from the mean.
I) Compute the 30^{th} percentile.

Question # 2 (15 marks)

Hiring students out of university is a rewarding, risky, and expensive aspect of business. Getting the right people is a big win for the organization, but it is often a challenge to keep these people from moving to other firms. On the other side of the issue, getting the wrong people is costly as the resources spent on recruitment, training, and the subsequent termination costs can add up significantly. Fortunately, some of these people will not be happy with the organization and its culture and leave for opportunities elsewhere. The HR Director at MNV Ltd. Is concerned about this phenomenon. Define "R" as a "right" type of recruit and "W" as a "wrong" type of recruit. Suppose that 60% of the recruits from a particular school are the right type of recruits. Of those that are the wrong type of recruits, 35% leave within a year, when MNV would normally terminate them at the end of their probation, whereas the proportion of right recruits that stay is 70%.

A) Construct either a 2-way probability table or a probability tree of this problem.
B) What type of probabilities is used in this problem? Select one by circling.

Classical	Relative Frequency	Subjective

C) What is the probability that a recruit will still be with MNV Ltd. After 1 year?
D) What is the probability that a recruit leaves the firm and is the "right" type?
E) The HR Director receives an email from a recruit hired in the last two years with the Subject Line "I'm Leaving MNV". What is the probability that it is from a recruit that the firm would want to keep?
F) Recruiting a student belonging to the "wrong" type is considered as a bad hiring decision. In the meantime, recruiting a student who belongs to the "right" type but does not stay is also considered as a bad hiring decision. What is the probability that the HR of MNV makes a bad hiring decision?